University of Pennsylvania:

Essay on Menstruation

Passed March 1829

by

Joseph M. Urquiola, Native of Trinidad de Cuba

January 8th

1829

Each organ of our body assumes its function at separate successive periods - Thus, setting aside the development of the Embryo and foetus, the lungs first begin to act, assuming their function immediately after birth; then the digestive apparatus - Some days elapse before the impressions of light and sound are perceived - After some weeks the moral faculties begin to be developed; progression and expression occur much later - The complete development of the genital organs takes place at puberty.

Growing organs require proportionally a greater quantity of blood than the same organs after having attained their full size - The proportion therefore diminishes with the increase of size, although the absolute quantity be greater; and if the proportion remains greater it is owing to an irritation, which in mucous membranes is often relieved by a haemorrhage

The Uterus, like other organs, receives a supply of blood for its increase and renewal until puberty, at

which time its increase ceases and its renewal is solely carried on - The proportion of blood going to it does not diminish, but continuing great occasions irritation, which ends in the effusion of a bloody fluid constituting menstruation.

Menstruation is defined - The discharge of a bloody fluid from the Uterus, peculiar to the human female, occurring for the first time at puberty and recurring at regular periods, unless interrupted by pregnancy, suckling or disease, until the approach of old age. The regularity of the discharge seems to be a certain sign of fecundity - Its absence is not incompatible with the power of conception.

Climate, constitution and habits exercise great influence over our growth - The warmer the climate the earlier we arrive at puberty and menstruation of course appears earlier - In the southern parts of Asia and tropical regions of Africa and America, girls, it is said, menstruate at nine or ten years of age - In the temperate zones women do not menstruate until they have arrived at the fourteenth

year or thereabouts – In the Polar regions the menses do not appear until the age of eighteen or twenty. Those of a lax fibre and who live luxuriously menstruate earlier and have a more profuse discharge.

What is the exact nature of the menstrual fluid? This question has long been agitated and is doubtful whether it will ever be decided – Some consider it a mere haemorrhage; others, a perfect secretion – I am inclined to adopt the opinion that it is an increased secretion of the mucus and serosity of the parts holding in solution a small portion of pure blood.

That menstruation may take place several circumstances are required

1st The Uterus must be in a healthy condition – If there be a deviation from health of either its substance or lining membrane, there will be irregularity in the discharge

2d The Ovaries must be in a natural condition If diseased or wanting, the Uterus will not perform its functions – In what manner the Ovaries influence

the
-f

con
no
go
pr
-t

of
the
rem
a
lau
Dra
sta
tha
of
bl
the

the actions of the Uterus is not known; though their influence is perfectly well established.

3rd The Uterus must not only be in a healthy condition – it must also be excited, and unless excited no flow will take place – This excitement should not go beyond, nor fall short of, a certain length to produce what is called Natural or healthy menstruation

4th If an organ in the system be in a state of irritation at the time the ovaries act on the Uterus, the irritated organ will take on the action, the Uterus remaining inactive – hence vicarious discharges – Such a condition is often the cause of Amenorrhoea – It is a law of our oeconomy; that an organ, already excited, should draw to itself the irritation of another organ in a state of health, provided this new impression be feebler than the more ancient – V. g. If in the active state of Gastritis without any preparation we apply a blister to the Epigastrium, what is the consequence? the irritation of the blister is added to that existing in

the
the
ble
ret

the
ceed
wit
by
hav
the
cas
diff
the
the
the
the

nen
and
lif

the stomach in the disease is aggravated; but if [illegible] the inflammation is considerably reduced or [illegible] the pulse, then its medicine power will not get clear of the relief it affords.

5th [illegible] of plethora [illegible] the system. [illegible] sanguine [illegible] [illegible] that the [illegible] at [illegible] place in the [illegible] of the [illegible] [illegible] have appeared in the [illegible] of the [illegible] [illegible] cannot stop the flow [illegible] [illegible] present [illegible] the other. [illegible] [illegible] the irritation [illegible] [illegible] to the capillaries of the [illegible] [illegible] independently of the rest of the system [illegible] [illegible] the total quantity of the [illegible]

But even after large sanguine evacuations [illegible] the nervous system acts as usual, then will go to the [illegible] and the [illegible] will be powerful. [illegible] state of debility is not [illegible] with the existence of irritation.

on the [illegible] of [illegible] increases (I believe all allow) in debility in a direct ratio.

It probably that part of the nervous system passing over the mamillæ becomes developed, exists there longer and through them the uterus which now acquires its full size and adult form.

When man reaches puberty the testes begin to enlarge, but that season may be accelerated, the action of the senses of these parts must be increased, that they may excite the parts to bring a more than for the purpose — the senses are excited by the action of the mind. The same takes place in woman, and the action which in man falls on the testicles in her falls on the uterus — this organ is excited — the irritation is relieved by the increased secretion of mucus in exhalation of semen — the blood however over the uterus is so great a quantity that cannot be a tax upon the exhaustion by the expense of the [illegible] & [illegible] [illegible] & a portion of it becomes superfluous in the secretion — it seems

to me to come here pretty nearly without any [illegible] the
[illegible] inflammation of [illegible] [illegible] [illegible] the
[illegible] closure by some other.

Menstruation is certainly a natural
process and it is the consequence of an inflammatory
excitement of the lining of the uterus caused by the
action of the nerves of the part, excited by the powers
of the mind. That it depends on more than a natural
calling excitement I think the following will prove.

1st The symptoms preceding and accompanying
its appearance — these are present so generally,
that the few cases in which they seem to be wanting, may
be ascribed to the obtuse sensibility of the individuals —

2d At the first appearance of the menses
they are generally then in the top — the calamities
because the uterus is more active and capable of re-
ceiving too great an influx of blood — and an approach
of the whole brought into them — but the timeliness
of the natural secretions and their necessary quantity
show plainly that a more than natural excitation exists

from an increase secretion or to an increase of slight inflammations of all mucous membranes

3d If perfectly natural secretion a copious discharge with at irregular intervals — it is that haemorrhages from different parts may take place instead of the menses, keep up the periodicity and be obedient to the menstrual laws, without disarrangement of the system, though uncomfortable and sometimes painful — this never takes place with the secretion of bile of urine &c

4th If a perfectly natural secretion the imitation of a distant organ will not prevent its appearance —

5th The uterus is not a gland — its lining membrane is of the mucous kind, and like all mucous membranes in a natural state its functions secrete mucus from its villi exhale a serous fluid —

6th It is from the villi or follicles or both that the serous process — by this the membrane sometimes forms — a pyometrocoea is formed — from

them proceeding the blood in the same manner as - and from them comes the lacunar discharge, and this proceeds from the stomach - I am not willing to allow to the same part a peculiarly of action - I have already said that the natural secretion of the lining of the stomach is the same with that of mucous membranes and may not therefore will not change when the secreting parts are in a state of unnatural irritation and the stomach will expose with the same irritation, giving rise to, the above discharges -

Those who assume that the intussusception is a natural secretion, pass to the stomach the action of a gland - the following arguments are brought in support of the opinion

1st That the structure and in its secretions it is similar to glands

The similarity of structure consists in its villous and vascular character; but the villous character is that of mucous membranes, either one of the same kind which is the lining of the alimentary canal - the secretions of the stomach are not to that

of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] cir-
cumstances — the [illegible] [illegible] the [illegible] [illegible] in
common with [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] supposed [illegible] [illegible] [illegible]
inflammation of the cellular tissue, [illegible] [illegible] [illegible]
meet with [illegible] [illegible] albumen [illegible] is found
the mucous tissue contains albumen matter in its composition
and probably [illegible] mucous tissue of [illegible] [illegible] [illegible].

2nd That [illegible] other secreting [illegible] [illegible] is
very copiously diffused through it, [illegible] [illegible] [illegible]
manner [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

In the [illegible] of the [illegible] [illegible] [illegible]
[illegible] to [illegible], [illegible] secretion [illegible] [illegible] [illegible] the
[illegible], as have already mentioned several times [illegible]
[illegible] something else — that the [illegible] in the [illegible] of
the [illegible] is to [illegible] the [illegible] [illegible] that for the
purpose of secretion [illegible] [illegible] [illegible] [illegible]
[illegible] of nature to supply the [illegible] [illegible] [illegible] [illegible]

[illegible] in the effusion in the foot's sole to explain the truth of the proposition. I believe such an argument is merely illusory for congestion, which is the immediate cause of inflammation — If you the author [illegible] to open a bursal sac since the inflammation is always present and since the liver is so exposed to offense from it.

3 That pneumatosis like other secretions, is at first imperfectly made and is subject afterwards to retention and derangement —

She has been able to ascertain the period at which the secretions of tears, saliva, bile, urine &c commence; and whether there be painful sensations accompanying them, and whether they are at first imperfectly made? even with a sensible acidity in, or coloured the system by urinous accumulation — [illegible] to the [illegible] of a [illegible] of the natural secretion of the liver, and its absence if I mentioned before expressed on the [illegible] of irritation existing

4th That in [illegible], if the [illegible] [illegible]

during the season of venereal excitement there is an uterine discharge which is [illegible] consisting in [illegible] [illegible] [illegible] the same [illegible] as menstruation [illegible] to give to the uterus an aptitude to conception - this fluid differs generally from the menses in appearance, but in some instances they are perfectly similar and this happens only when the animal [illegible] suffers a violent exacerbation.

The increase of [illegible] and density of the [illegible] of the uterus [illegible] region compress the discharge of the [illegible] [illegible] [illegible] menstruation - but when the venereal desire [illegible] [illegible] the same takes place as in women - the effects are [illegible] [illegible] blood [illegible] to them [illegible] they can act upon [illegible] [illegible] of it purposes and function - this seems to me an additional proof in support of my proposition - These discharges do not give to the uterus an aptitude to conception they only show that this organ [illegible] [illegible] the [illegible] [illegible] the [illegible] and capable of performing the functions for which nature intended it. They are the effect and not the cause

of the capacity of the uterus to conceive. Some suppose that the existence of infantile assimilation resulting from the normal position because the female is selected by the male of the species. But this does not thinks, supposes assuming the male of the infantile assimilation, I believe, at all times the female; but is only taking place when his erotic passion is excited - just so with us in this respect. I think there is no difference between man and the brute.

2d That the uterus is a fluid in secretion at least varying very essentially from the blood varying with its column whose coagulability is left in respect to putrefaction and in normal analogies present different results.

The column cannot be so close as the open arterial blood in the matter state from which I was taken up of the coagulants - the serous representing that of the plasma - which is applicable - the solution produces in coagulating and in intercepting or rendering - the [illegible] is next to [illegible]

I do not think necessary to enter farther into the subject. The antecedent reasons seem to me sufficient to prove that the Menstrual action depends on a slight inflammation of the Uterus. And is not a natural Secretion. The object of nature in Establishing this discharge is, it seems, to accustom the Uterus to irritations, that it may not suffer too much by the impression made on it at the time of impregnation, when the action which is to form the Membrana Decidua takes place.

No 5

47 Sixth 8th

Passed March 3d
1828